Natural under VM/CMS

This section contains special considerations that apply when running Natural under VM/CMS. The following topics are covered:

- Issuing CP and CMS Commands from Natural
- Reading the CMS Program Stack
- Hardcopy Function
- Applying Fixes to Natural
- Natural in Batch Mode under CMS

Issuing CP and CMS Commands from Natural

You can use the Natural system command "CMS" to issue CP and CMS commands; for example, "CMS FLIST * DATA B" or "CMS CP SPOOL PRT *".

If you enter "CMS" without parameters, a menu prompts you for a CP/CMS command. To exit from the menu enter a period (.) in the first position.

To issue CP or CMS commands from within a Natural program, code the following statement:

```
CALL 'CMS' command rc
```

where *command* is either an alphanumeric variable or a constant, and *rc* is a variable (format/length I4) which receives the return code from the CP or CMS command. The second parameter (*rc*) is optional. Full command resolution is provided just as in normal CMS interactive command mode.

Reading the CMS Program Stack

To read a line from the CMS program stack into a Natural variable, code the following:

```
CALL 'CMSREAD' line
```

where *line* is an alphanumeric variable. The line read from the program stack is either truncated or padded with blanks to fit the length of the variable. If the program stack is empty, CMSREAD returns the character string "*EOD*".

Hardcopy Function

The hardcopy function of the Natural CMS Interface is enabled by specifying parameter

```
HCAM=CMS
```

either in NATPARM ASSEMBLE, or dynamically when invoking Natural.

The Natural terminal command %H (described in the Natural Reference documentation) sends output to your virtual printer. Specifying %HL produces a file called NATURAL LISTING A.

Applying Fixes to Natural

Software AG provides fixes in the form of zaps to remedy problems which are discovered after your Natural installation tape was shipped.

- Before applying the zaps, ensure that you have made backup copies of the files.
- Use the NATZAP facility to apply these zaps to your Natural TEXT files.
- After applying the zaps, the Natural module and DCSS must be built anew. Use the NATBLDM and NATBLDS commands respectively to do this.

For more information about NATZAP, type "HELP NATZAP" in the Natural installation user ID.

Natural in Batch Mode under CMS

For information on using Natural in batch mode, refer to the corresponding general section and in particular to the subsection Running Natural in Batch under CMS.